

Effect alkaloid Narciclasine Extraction of *Zephyranthes candida* On Microtubules of HepG2 Hepatic Cell Line

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Abstract

Background: Alkaloid narciclasine extraction of *Zephyranthes candida* are microtubular toxins of chemically similar nature that disrupt microtubule function by binding to a site on β -tubulin and suppressing microtubule dynamics. effect in hepatic cell line.

Objective: To evaluate biological activity of alkaloid narciclasine extraction of *Zephyranthes candida* on microtubule HepG2 cell line by used GF tubulin with alcoholic extraction.

Patients and Methods: The experiments work in China (Wuhan) 2016 need about 6 months , we used TLC technology to extraction alkaloids narciclasine from by used different concentration 20,40,80,100,200,400 $\mu\text{g/ml}$ for one hours to microtubule cell line of HepG2 cell line and used high concentration 1000,2000 $\mu\text{g/ml}$ to investigate the action of alkaloids narciclasine onto the network of microtubule to one hours .

Results: Increased the number of the cell effect by extraction in microtubule by used GF tubulin inside the cell by alkaloid or alcoholic extraction see the results by immunofluorescence microscope, the microtubule is effect by high concentration of extraction see apoptosis and thinned down, and individual fibres have a wavelike shape. Anther experimental work was conducted to determine the biological activity of alkaloids Narciclasine on microtubule in concentration 20 $\mu\text{g/ml}$ in (12,10,8,6) hours incubation and 400 $\mu\text{g/ml}$ for 10 min to study cell line and the recovery of its disruption. Cells were treated with alkaloids at various concentrations from 20 $\mu\text{g/ml}$ to 400 $\mu\text{g/ml}$ for 60 min microtubules were recovered and network is nearly restored. the results show the microtubules back normal after reduce extraction alcoholic and alkaloids in 12 hours by used indirect immunofluorescence.

Conclusion: The cells showed changes in the arrangement of microtubules even at the 80 $\mu\text{g/ml}$ concentration of cytostatics after 60-min exposition. Its damage increased with increasing concentration of cytostatics.

Key words: Cytoskeleton, microtubule disruption, cytoskeleton recovery, alkaloids.

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Received: 9th May 2017

Accepted: 4th June 2017

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